

End-of-Unit Assessment Rubric

Penny Jars and Plant Growth

Gr. 4 Unit 9

Problem 13: Use and determine relationships between variables in input-output tables.

Scoring	Descriptor
4	Student response satisfies 7 of the elements listed below.
3	Student response satisfies 5-6 of the elements listed below.
2	Student response satisfies 3-4 of the elements listed below.
1	Student response satisfies 1-2 of the elements listed below.
0	Student response satisfies 0 of the elements listed below.

Scoring Guidelines (7 Elements total)

- PART A: (2 elements total) Score 1 point if 3-4 of the output values in the table follow the rule $n + 3 = p$. Score 1 additional point if all 5 output values in the table follow the rule $n + 3 = p$.
- PART B: Score 1 point for equation $n - 2 = p$ or equivalent.
- PART C: (4 elements total) Score 1 point for each correctly filled in value (up to 2 elements). Score 1 point for each valid explanation for each value (up to 2 elements).

This question correlates to the following MA Mathematics Framework Standards:

4.P.6 Determine how change in one variable relates to a change in a second variable, e.g., input-output tables.

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Problem 14: Interpret a line graph, construct a table, and use mathematical notations to represent a situation.

Scoring	Descriptor
4	Student response satisfies 6 of the elements listed below.
3	Student response satisfies 4-5 of the elements listed below.
2	Student response satisfies 3 of the elements listed below.
1	Student response satisfies 1-2 of the elements listed below.
0	Student response satisfies 0 of the elements listed below.

Scoring Guidelines (6 Elements total)

- **PART A**
 - (1 element): Recognize that Jamie started with \$5 in the bank.
 - (1 element): Explanation is clear and included.
- **PART B**
 - (1 element): Shows evidence of "start with \$5" in table.
 - (1 element): Represents constant growth of \$5 in table.
- **PART C**
 - (1 element): Expression or equation is included, i.e.,
 $(\text{week} \times 5) + 5 = \text{money earned}$
 - (1 element): Explanation is clear and included.

This question correlates to the following MA Mathematics Framework Standards:

4.P.4 Use pictures, models, tables, charts, graphs, words, number sentences, and mathematical notations to interpret mathematical relationships.